

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Centaurea cyanus***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACETIC-ACID	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	ALUMINUM	Flower	--	--		
101	APIGENIN	Shoot	--	--		Jim Duke's personal files.
4	APIIN	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	APIIN	Shoot	--	--		Jim Duke's personal files.
1	ARNIDIOL	Flower	--	--		Jim Duke's personal files.
20	BENZOIC-ACID	Flower	--	--		Jim Duke's personal files.
47	BETA-SITOSTEROL	Flower	--	--		Jim Duke's personal files.
102	CAFFEIC-ACID	Shoot	--	--		Jim Duke's personal files.
102	CAFFEIC-ACID	Flower	--	--		Jim Duke's personal files.
77	CHLOROGENIC-ACID	Flower	--	--		Jim Duke's personal files.
77	CHLOROGENIC-ACID	Shoot	--	--		Jim Duke's personal files.
3	CICHORIIN	Flower	--	--		
10	CNICIN	Flower	--	--		Wealth of India.
5	CYANIN	Flower	--	--		
3	CYNAROSIDE	Shoot	--	--		Jim Duke's personal files.
61	FERULIC-ACID	Flower	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	HISPIDULIN	Shoot	--	--		Jim Duke's personal files.
6	IRON	Plant	--	--		
4	ISOCHLOROGENIC-ACID	Shoot	--	--		Jim Duke's personal files.
11	ISORHAMNETIN	Shoot	--	--		Jim Duke's personal files.
75	KAEMPFEROL	Shoot	--	--		Jim Duke's personal files.
75	KAEMPFEROL	Plant	--	--		Wealth of India.
78	LUTEOLIN	Shoot	--	--		Jim Duke's personal files.
78	LUTEOLIN	Plant	--	--		Wealth of India.
3	MUCILAGE	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	N-NONACOSANE	Flower	--	--		Jim Duke's personal files.
2	NEO-CHLOROGENIC-ACID	Flower	--	--		Jim Duke's personal files.
2	NEO-CHLOROGENIC-ACID	Shoot	--	--		Jim Duke's personal files.
25	P-COUMARIC-ACID	Flower	--	--		Jim Duke's personal files.
13	P-HYDROXY-BENZOIC-ACID	Flower	--	--		Jim Duke's personal files.
1	PELARGONIN	Flower	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
43	PROTOCATECHUIC-ACID	Flower	--	--		Jim Duke's personal files.
176	QUERCETIN	Shoot	--	--		Jim Duke's personal files.
1	QUERCETOL	Plant	--	--		Wealth of India.
6	QUERCIMERITRIN	Shoot	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	RUTOSIDE	Plant	--	--		Wealth of India.
34	SALICYLIC-ACID	Flower	--	--		Jim Duke's personal files.
44	SCOPOLETIN	Shoot	--	--		Jim Duke's personal files.
6	SYRINGIC-ACID	Flower	--	--		Jim Duke's personal files.
35	TANNIN	Flower	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	UMBELLIFERONE	Shoot	--	--		Jim Duke's personal files.
24	VANILLIC-ACID	Flower	--	--		Jim Duke's personal files.